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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,846

11/08/2006

Makoto Iwai

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3664

25191

7590

02/18/2009

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EXAMINER

HITESHEW, FELISA CARLA

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

02/18/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/594,846	Applicant(s) IWAI ET AL.	
	Examiner Felisa C. Hiteshew	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/28/2006 & 01/15/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The PTOL 1449s of 09/28/2006 & 01/15/2009 have been received, reviewed and considered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5 and 7 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by WO 2004/013385 A1.

WO '385 A1 teaches a method of producing a Group III nitride single crystal, which comprises reacting at least one Group III element selected from the group consisting of gallium (Ga), aluminum (Al) and indium (In) with nitrogen (N) in a mixed flux of sodium (Na) and at least one of an alkali metal (except Na) and an alkaline earth metal. The method allows the production, with a good yield, of the single crystal of group III element nitride which is transparent, is reduced in the density of dislocation, has a bulk form, and is large.

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Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 2004/013385 A1.

WO '385 A1 teaches a method of producing a Group III nitride single crystal, which comprises reacting at least one Group III element selected from the group consisting of gallium (Ga), aluminum (Al) and indium (In) with nitrogen (N) in a mixed flux of sodium (Na) and at least one of an alkali metal (except Na) and an alkaline earth metal. The method allows the production, with a good yield, of the single crystal of group III element nitride which is transparent, is reduced in the density of dislocation, has a bulk form, and is large.

The difference being that WO '385 A1 does not exactly teach a method for producing GaN single crystal using a system for hot isostatic press. However, in the absence of unobvious results, it would have been obvious to one of ordinary skill in the art through routine experimentation the optimum, operable process parameter limitations in order to ensure proper orientation.

Apparatus limitations may have little weight in process claims. In re Tarcy-Honoch 158 USPQ 141, 150; Stalego v. Heymes 120 USPQ 473, 478 (CCPA); Ex Parte Hart 117 USPQ 193; In re Freeman 44 USPQ 116 (CCPA); In re Sweeney 72 USPQ 501 (CCPA).

It has been held that to be entitled to weight in method claims, the recited structure limitations therein must affect the method in a manipulative sense, and not to amount to the mere claiming of a use of a particular structure. *Ex parte Pfeifer*, 1962 C.D. 408 (1961).

A reference is good not only for what it teaches by direct anticipation but also for what one of ordinary skill might reasonably infer from the teachings. In re Opprect 12

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USPQ 2d 1235, 1236 (CAFC 1989); In re Bode 193 USPQ 12; In re Lamberti 192 USPQ 278; In re Bozek 163 USPQ 545, 549 (CCPA 1969); In re Van Mater 144 USPQ 421; In re Jacoby 135 USPQ 317; In re LeGrice 133 USPQ 365; In re Preda 159 USPQ 342 (CCPA 1968).

Any minor differences in the limitations of the dependent claims have been considered. This statement is meant to include limitations such as

Furthermore, any such differences are deemed to be result-effective variables that one of ordinary skill in the art would be expected to manipulate to advantage. Additionally, such limitations can be considered to have been simply known as conventional to the artisan practicing in the art at the time the invention was made and/or were common practices which were so well known in the art that they would have been taken for granted. If applicant believes that one or more limitations are critical to the invention, then applicant should amend the claims to reflect such critical limitations as well as indicate where in the specification such critical limitations were discussed and demonstrated.

The limitations of all claims have been considered and are deemed to be within the purview of the prior art.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Felisa Hiteshew whose telephone number is (571) 272-1463. The examiner can normally be reached on Mondays through Thursday from 5:30 AM to 4:00 PM with Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the

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Examiner's supervisor, Mikhail Kornakov, can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-1463.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see

<http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866- 217-9197 (toll-free).

/Felisa C. Hiteshew/
Primary Examiner, Art Unit 1792